



# CODATU2015

02 - 05 FEBRUARY • ISTANBUL / TURKEY

[www.codatu2015.org](http://www.codatu2015.org)



**BOOK OF ABSTRACTS**





This collection of research papers and case studies is the companion document to the 16th International Conference of Urban Transport, February 2-5, 2015 at Istanbul Technical University Maçka Campus, Istanbul, Turkey.

These papers are reproduced with the permission of the authors. Rights of authorship and copyright are reserved. Contents may not be reproduced without the permission of the author and Istanbul Technical University Faculty of Business and CODATU (Cooperation for urban mobility in the developing world)

Copies can be ordered from:

**CODATU (Cooperation for urban mobility in the developing world)**

21 boulevard Vivier-Merle

69003 Lyon, France

Tel: +33 (0)4 78 62 23 09

Fax: + 33 (0)4 78 62 32 99

E-mail: [contact@codatu.org](mailto:contact@codatu.org)

Internet: <http://www.codatu.org>

© Copyright 2015 ITU - CODATU. All rights reserved

# TABLE OF CONTENTS

	Page
<b>CONFERENCE PROGRAM</b>	<b>11</b>
<b>ABSTRACTS</b>	<b>26</b>
2023 ISTANBUL MOBILITY PROJECTION AND IMPORTANCE OF THE PUBLIC TRANSPORTATION IN ECONOMIC GROWTH PERSPECTIVE	26
SUSTAINABLE URBAN MOBILITY PLANS FOR DEVELOPING CITIES	26
APPLICATION OF QUASI-EXPERIMENTAL DESIGNS FOR ASSESSING TRANSPORT POLICIES IN DEVELOPING CITIES	27
THE CHALLENGE OF FINDING A ROLE FOR PARATRANSIT SERVICES IN THE GLOBAL SOUTH	27
TRANSFERABILITY OF SUSTAINABLE URBAN MOBILITY SOLUTIONS	28
WILL PEAK TRAVEL OBSERVED IN NORTHERN METROPOLITAN AREAS OCCUR IN THE SOUTH ?	28
URBAN ACCESSIBILITY AND AFFORDABILITY: A CASE STUDY FOR ISTANBUL	29
DEVELOPMENT OF A RURAL ACCESSIBILITY INDEX FOR SOUTH AFRICA	29
URBAN LANE REDIRECTION METHODOLOGY BASED ON AN OVERALL AVERAGE ACCESSIBILITY ANALYSIS	30
TRANSPORT GOVERNANCE OF THE 'INTERNATIONAL BEST PRACTICE': PARALLELS BETWEEN BRT DEVELOPMENTS IN AHMEDABAD AND BOGOTÁ	30
INTEGRATED ROAD PRICING AND BUS RAPID TRANSIT: THE EFFECT OF HABITUAL BEHAVIOUR AND CAPTIVE ATTITUDE	31
AN OPTIMIZATION MODEL FOR BRT SYSTEMS: ISTANBUL METROBUS CASE	31
APPROPRIATE OPERATING ENVIRONMENTS FOR FEEDER-TRUNK-DISTRIBUTER OR DIRECT ROAD BASED PUBLIC TRANSPORT SERVICES IN CITIES OF DEVELOPING COUNTRIES	32
CNG CONVERSION OF VEHICLES IN DHAKA: AN ANALYSIS OF AIR QUALITY, GHG AND CONGESTION IMPACTS	32

# TABLE OF CONTENTS

DEVELOPMENT OF ON ROAD EMISSION AND FUEL CONSUMPTION MODELS FOR ESTIMATING EMISSIONS AND FUEL CONSUMPTION OF MOTORCYCLES IN ASIAN DEVELOPING COUNTRIES	33
STRATEGY TO REDUCE CARBON FOOTPRINT INTEGRATING MOBILITY, ENERGY, TERRITORY AND BEHAVIOURS	33
THE IMPORTANCE OF MARKETING PROCESSES ON THE PERCEPTION AND IMAGE OF PUBLIC TRANSPORT IMPLEMENTATION STAGE FOR AN INTEGRATED MARKETING POLICY IN THE BUCHAREST AGGLOMERATIONS	34
URBAN MOBILITY AND AIR QUALITY IN CLUJ-NAPOCA, ROMANIA	35
INFORMAL TRANSPORT SERVICES IN BOGOTÁ AND N'DJAMENA: ACTORS, INTERACTIONS AND CHARACTERISTICS	35
IMAGINING COMPLETE STREETS FOR DEVELOPING AFRICA	36
AN ANALYSIS ON RAPID URBANIZATION ISSUES IN MONGOLIA AND ITS EXTERNALITIES. A CASE STUDY ON APARTMENT AND GER RESIDENTIAL AREAS IN ULAANBAATAR CITY	36
SUFFICIENT ACCESSIBILITY AS A POLICY TO INFORM URBAN PATTERNS APPROPRIATE TO MITIGATE CLIMATE CHANGE, AIR QUALITY AND ENERGY CHALLENGES IN DEVELOPING COUNTRIES	37
IMPACT DES NOUVEAUX TCSP SUR LA MOBILITÉ DES USAGERS À ALGER	38
MÉTRO LÉGER DE SFAX : UN PROJET DE MOBILITÉ DURABLE ÉCONOME EN ÉNERGIE	38
EVALUATION OF THE PERFORMANCE OF URBAN PUBLIC TRANSPORT CONNECTIVITY. BACKGROUND OF THE CONNECTIVITY ISSUES IN BUCHAREST PUBLIC TRANSPORT MAIN STOPS	39
A SOLUTION TO THE PROBLEMS OF LARGE URBAN AGGLOMERATIONS	39
A PERFORMANCE INDICATOR FOR BRT	40
PLANNING OF TRANSIT-ORIENTED DEVELOPMENT CITIES FOR GREATER MOBILITY	40
DETERMINANTS OF LAND USE CHANGE MRT PURPLE LINE IN BANGKOK METROPOLITAN REGION	41
PARKING POLICY AS A COUNTERMEASURE TO PROMOTE PUBLIC TRANSPORT USAGE: CASE STUDY OF NEHRU PLACE DISTRICT CENTRE IN NEW DELHI, INDIA	41

<b>CHARACTERISTICS OF AGRO RETAIL LOGISTICS IN METROPOLITAN CITY OF DELHI, INDIA</b>	<b>42</b>
<b>FREIGHT TRANSPORT MANAGEMENT MEASURES IN THE RICE INDUSTRY IN THE MEKONG DELTA OF VIETNAM: AN OVERVIEW AND POLICY CONSIDERATION</b>	<b>42</b>
<b>EVALUATION FOR URBAN FREIGHT TRANSPORT (UFT) PROJECTS</b>	<b>43</b>
<b>A SYSTEM DYNAMICS APPROACH TO UNDERSTANDING TRAFFIC LAW COMPLIANCE PROBLEM IN COMMERCIAL MOTORCYCLE OPERATION</b>	<b>43</b>
<b>MOTOTAXIS OU CLANDOS ENTRE ADAPTATION CITOYENNE ET REFUS POLITIQUE AU SEIN DE LA VILLE DE N'DJAMENA</b>	<b>44</b>
<b>MISE EN PLACE D'UN SYSTÈME DE TRANSPORT URBAIN PERFORMANT ET DURABLE AUTOUR DES MOTO-TAXIS À BOUAKÉ</b>	<b>44</b>
<b>PLANNING TWO WHEELS IN LOMÉ FOR A SUSTAINABLE URBAN MOBILITY VISION FOR 2030</b>	<b>45</b>
<b>CHALLENGES AND OPPORTUNITIES FOR MOTORIZED TWO-WHEELERS IN ASIAN CITIES</b>	<b>45</b>
<b>STRATEGIES FOR INTEGRATED URBAN AND TRANSPORT DEVELOPMENT IN MOTORCYCLE DEPENDENT CITIES – CASE STUDY IN HO CHI MINH CITY, VIETNAM</b>	<b>46</b>
<b>SUSTAINABLE POLICY FOR, AND ENVIRONMENTAL IMPLICATIONS OF, MOTORCYCLE OPERATION IN A HISTORICAL CITY, KANO, NIGERIA</b>	<b>46</b>
<b>THE ASSESSMENT OF ROAD SAFETY IN THE ROMANIAN CITIES. THE INFLUENCE OF THE ASSESSMENT PROCESS ON THE SAFETY PERFORMANCE OF PUBLIC TRANSPORT BASED ON THE SAFENET PROJECT – RESEARCH ON THE ESTIMATION AND INCREASE OF THE INTRINSIC SAFETY OF URBAN ROAD NETWORKS IN BUCHAREST</b>	<b>47</b>
<b>MAPPING PEDESTRIAN ACCESSIBILITY AND THE QUALITY OF WALKING IN AN AFRICAN CITY: PRAIA, CAPE VERDE</b>	<b>47</b>
<b>PRIORITIZATION OF THE BICYCLE NETWORK CLUSTERS INTEGRATED WITH THE PUBLIC TRANSPORT SYSTEM IN ISTANBUL METROPOLITAN AREA</b>	<b>48</b>
<b>ACHIEVING SUSTAINABLE URBAN TRANSPORT IN HARARE, ZIMBABWE: WHAT ARE THE REQUIREMENTS TO REACH THE MILESTONE?</b>	<b>48</b>
<b>INTEGRATED PLANNING OF TRANSPORT AND LAND-USE IN GREATER ABIDJAN</b>	<b>49</b>
<b>PUBLIC TRANSPORT SMART CARD SYSTEMS IN TURKISH CITIES: THE CHALLENGE OF PARATRANSIT</b>	<b>49</b>
<b>PLANNING AND MANAGEMENT OF BIKE-SHARING: LESSONS FROM THE TURKISH CASE STUDIES</b>	<b>50</b>
<b>THE CHANGE OF REGIONAL TRANSPORT ACCESSIBILITY OVER TIME BY USING SPATIAL ANALYSES</b>	<b>50</b>
<b>HOW NEW URBAN SETTLEMENTS CAN EFFECT THE URBAN TRANSPORT DEMAND IN ISTANBUL: A CASE STUDY OF KAYAŞEHİR</b>	<b>51</b>

### 1003 - A PERFORMANCE INDICATOR FOR BRT

*Abdullah Önder Türkoğlu<sup>1</sup>*

<sup>1</sup> IETT General Directorate, Transportation Planning Department, Turkey

#### **Abstract**

The bottleneck-shape of the city walls forces the necessity to develop alternative methods for the optimum use of roads. Public transportations main concern is to carry citizens. The ITS System for public transportation basically supplies classified and analyzable data to operators. Governors can manage their fleet strategically by the data provided, while simultaneously sharing this data with the citizens.

On the other hand, BRT is a bus network but can not be analyzed as regular bus lines. AVL based system supplies some advantage to develop new algorithm ot measure reliability of the network.

In this paper, some obtained operation and information from computerization of field operation process is discussed. Digitilization of the real world information is required some assuming. It is seen that, after computer aided bus fleet management system installation, measurable and controllable effective business process can be modelled and reorganized. Then an alogorithm will be offered and measured for regulatiry of a BRT network according to Istanbul Metrobus.

### 1003 - PLANNING OF TRANSIT-ORIENTED DEVELOPMENT CITIES FOR GREATER MOBILITY

*Abdul Azeez Kadar Hamsa<sup>1</sup>, Muslihah Mustapha<sup>1</sup>*

<sup>1</sup> International Islamic University Malaysia Urban and Regional Planning Kuala Lumpur-Malaysia

#### **Abstract**

With the fast growing changes in the economic structure and the need for improved economic growth, it is imperative to indulge in greater mobility of the people for economic benefits. The increasing use of private vehicles in the cities has affected the mobility of people significantly not only during peak hours but also off-peak hours. A number of literatures have stated about negative implications to the cities as a result of the effects on mobility. To improve the mobility of the people, it is very important to provide efficient, attractive and reliable public transportation system to induce a shift from the use of private to public transport. Planning of transit-oriented development (TOD) cities is an important initiative to address the growing needs of urban mobility. Urban mobility can be effectively addressed through the provision of efficient and effective public transportation system. In order to encourage greater use of public transportation system especially rail-based, it is highly necessary to plan the location of rail transit station at areas which could attract the use of rail transit services. It is learned that high density development, mixed land uses and efficient pedestrian infrastructure are the determining components for the surge in the use of public transit system. This paper analyses the land use characteristics of the selected transit stations along one of the existing Light Rail Transit (LRT) system in Kuala Lumpur to understand its possible effects on the passenger ridership.